CLAIMS

1.   An apparatus comprising:

a first circuit configured to communicate as a host through a first interface;

a second circuit configured to communicate through a second interface as a host when in a first mode and as a peripheral when in a second mode; and

a third circuit configured to (i) control said first and said second circuits and (ii) transfer information between said first and said second circuits.

2.   The apparatus according to claim 1, further comprising a first device coupled to said first interface.

3.   The apparatus according to claim 2, wherein said first device comprises a legacy USB device.

4.   The apparatus according to claim 2, further comprising a second device coupled to said second interface.

5. The apparatus according to claim 4, wherein said second device comprises a USB OTG dual role device (DRD).

6. The apparatus according to claim 4, wherein said second device comprises a legacy USB device.

7. The apparatus according to claim 1, wherein said first circuit comprises a USB controller.

8. The apparatus according to claim 1, wherein said second circuit comprises a USB 2.0 on-the-go (OTG) dual role device (DRD) controller.

9. The apparatus according to claim 1, wherein said third circuit comprises a device selected from the group consisting of a microcontroller, a microprocessor, an ASIC, a DSP, and a PLD.

10. The apparatus according to claim 1, wherein said third circuit is configured in response to one or more computer executable instruction.

11. The apparatus according to claim 10, wherein said computer readable instructions comprise firmware.

12. The apparatus according to claim 10, wherein said computer readable instructions comprise software.

13. The apparatus according to claim 2, wherein said apparatus is integrated with said first device.

14. The apparatus according to claim 1, wherein said apparatus is configured as a stand alone accessory.

15. The apparatus according to claim 2, wherein said apparatus is configured to add USB OTG dual role device (DRD) capabilities to said first device with no modifications to said first device.

16. An apparatus comprising:

means for communicating with a legacy USB device; and

means for communicating as a USB OTG dual role device (DRD); and

5   means for controlling and transferring information

between said means for communicating with a legacy USB device and

said means for communicating as a USB OTG dual role device (DRD).

17.   A method for adding USB on-the-go (OTG) dual role

device (DRD) capability to a legacy USB peripheral device

comprising the steps of:

providing a host interface;

providing OTG host/peripheral interface; and

communicating information between said host and said OTG

host/peripheral interfaces.

18.   The method according to claim 17, further comprising

the steps of:

enumerating a first device; and

responding to an enumeration request from a second device

5   with descriptors received from said first device modified to

indicate OTG DRD capability.

19.   The method according to claim 17, further comprising

the steps of:

responding to an IN token received through said OTG host/peripheral interface with a NAK;

5   sending an IN token via said host interface;

repeatedly responding with NAKs to IN tokens from said OTG host/peripheral interface until data is received via said host interface; and

sending said data received from said host interface via said OTG host/peripheral interface in response to an IN token.

20. The method according to claim 17, further comprising the steps of:

polling said host interface for an OUT token;

polling said OTG host/peripheral interface for an OUT token;

sending data received from either interface to the other interface.

21. A computer readable media comprising computer executable instructions for performing the steps according to claim 17.